

INTERNATIONAL SEARCH REPORT

International application No.
PCT/KR2004/003157

A. CLASSIFICATION OF SUBJECT MATTER

IPC7 H04R 7/04

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols).

IPC7 H04R

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
KR, JP: IPC as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
eKIPASS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|---|-----------------------|
| A | JP 2001-169389 A (CITIZEN ELECTRONICS CO LTD) 22 June 2001 See abstract, fig.1 | 1-9 |
| A | JP 58-162197 A (SANYO ELECTRIC CO LTD) 26 September 1983 See abstract, fig. 3, 4 | 1-9 |
| A | JP 56-058398 A (MATSUSHITA ELECTRIC IND CO LTD) 21 May 1981 See abstract, fig.3, 5 | 1-9 |
| A | JP 06-269089 A (T W DENKI KK) 22 September 1994 See abstract, fig.1 | 1-9 |

Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier application or patent but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

22 MARCH 2005 (22.03.2005)

Date of mailing of the international search report

22 MARCH 2005 (22.03.2005)

Name and mailing address of the ISA/KR

 Korean Intellectual Property Office
920 Dunsan-dong, Seo-gu, Daejeon 302-701,
Republic of Korea

Facsimile No. 82-42-472-7140

Authorized officer

NA, Yong Soo

Telephone No. 82-42-481-5680



BEST AVAILABLE COPY